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Notice of Allowability

Application No.

10/715,302

Examiner

Hoang V Nguyen

Applicant(s)

MCCOLLUM, GAIL EDWIN

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to application filed on 17 November 2003.
2. ☒ The allowed claim(s) is/are 1-29.
3. ☒ The drawings filed on 17 November 2003 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date 11/17/03, 4/27/04, 11/30/04.
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____.
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.



**HOANG V. NGUYEN
PRIMARY EXAMINER**

Allowable Subject Matter

1. Claims 1-29 are allowed.
2. The following is an examiner's statement of reasons for allowance:

Regarding claims 1, 12, 18, 23, 26 and 27, Wang et al (US 5,313,216) (Figure 4A) discloses an antenna comprising a pair of generally sinuous antenna arms extending outwardly from a common central axis and arranged opposite each other; each antenna arm in the pair comprising a plurality of sinuous cells, each of the plurality of cells having a rotational end. Wang, however, fails to further teach that each of the rotational ends terminating on an orientation line, the orientation lines of the pair of the antenna arms spaced a predetermined distance apart in a parallel relationship to each other, wherein each of the antenna arm being formed without interleaving the other antenna arm.

Claims 2-11 are allowed for depending on claim 1.

Claims 13 and 14 are allowed for depending on claim 12.

Claims 19-22 are allowed for depending on claim 18.

Claims 24 and 25 are allowed for depending on claim 23.

Claims 28 and 29 are allowed for depending on claim 27.

Regarding claim 15, Wang discloses an antenna comprising two antenna arms located opposite each other on an axial axis and separated from each other by a first predetermined distance. Wang, however, fails to further teach a pair of phasing stubs, one of the stubs connected to a feed point on one of the antenna arms; a reflector oriented a second predetermined

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distance on the axial axis from the two antenna arms; wherein the first and second predetermined distances selected to provide a output impedance at the phasing stubs of about 300 Ohms.

Claims 16 and 17 are allowed for depending on claim 15.

3. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

- Patents to Lalezari (US 5,146,234), Newham (US 6,191,756 B1) and Campbell (US 6,211,839) disclose antennas comprising sinuous antenna arms.
- Patent 5,936,594 discloses an antenna comprising antenna arms and phasing stubs.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hoang V Nguyen whose telephone number is (571) 272-1825. The examiner can normally be reached on Mondays-Fridays from 9:00 a.m. to 5:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoang Nguyen can be reached on (571) 272-1825. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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6. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Hvn
1/26/05



HOANG V. NGUYEN
PRIMARY EXAMINER